UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

APR 13 2007

REPLY TO THE ATTENTION OF:

WG-15J

James K. Cleland, Chief
Lansing Operations Division
Michigan Department of Environmental Quality
P.O. Box 30273
Lansing, Michigan 48909-7773

Dear Mr. Cleland:

Enclosed please find a copy of the Michigan Department of Environmental Quality's (MDEQ) Fiscal Year 2006 Data Verification final report for the Upper Peninsula District Office.

This report presents the results of the data verification audit conducted by Region 5 representatives, Jennifer Crooks and Alicia Brown, and by Jennifer Kennedy of the Cadmus Group, on May 30 – June 2, 2006. A file audit of individual community, nontransient noncommunity and transient noncommunity water systems was conducted to determine whether the data in the State files and State data management systems were consistent with the information reported to the Federal data management system. The results are provided in the enclosed report.

The Upper Peninsula District Office is commended for excellent compliance with the Radionuclides Rule, and with meeting the Phase II/V Rule requirements for nitrate monitoring. Compliance with the Total Coliform Rule was very good. Delta and Menominee County Health Departments provided very good documentation in the files concerning complete metals/cyanide waivers, and Phase II/V Rule waivers. Sanitary surveys were thorough and complete; inventory information such as sources and entry points were well-documented.

The report also makes a number of recommendations. As a follow up to this report, we will include these recommendations in the FY 2008 Annual Resource Deployment Plan; thus, these tasks can be prioritized in light of existing workload. MDEQ should continue to focus efforts on meeting the sanitary survey goals for the mobile home parks and noncommunity water systems. Most of the discrepancies involved the Lead and Copper Rule and the Disinfection By-Products Rule:

- The UP district office should ensure that total trihalomethanes and haloacetic acids sampling are conducted and submitted to the district office according to each system's monitoring schedule.
- The UP district office should also ensure that data submitted to the district office is entered into SDWIS/State in a timely manner.
- Violations should be assigned and reported when a system fails to collect triennial samples on time; systems must sample every 3 years, not every 3-year compliance period.

If you have questions, please do not hesitate to call me or Jennifer Crooks of my staff at (312) 886-0244.

Sincerely yours,

Thomas Poy

Thomas Poy, Deputy Branch Chief
Ground Water and Drinking Water Branch

Enclosure

cc: Frank Baldwin, MDEQ (w/enclosure)
Carrie Monosmith, MDEQ (w/enclosure)
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FINAL REPORT

U.S. Environmental Protection Agency
Public Water System Supervision Program Data Verification Report
Michigan Department of Environmental Quality
Upper Peninsula District Office
April 10, 2007

I. Introduction

During the week of May 30, 2006, the "team," consisting of representatives of Region 5 of the U.S. Environmental Protection Agency (EPA), Jennifer Crooks and Alicia Brown and a representative of The Cadmus Group, Inc., Jennifer Kennedy, conducted a data verification (DV) of the Upper Peninsula (UP) District Office of the Michigan Department of Environmental Quality (MDEQ) Bureau of Water, drinking water program. Ms. Kennedy directed the on-site review, and Ms. Crooks compiled the data and prepared this report. The team reviewed the files of a number of randomly selected public water systems (PWS) maintained by MDEQ and Michigan's local health departments. The team reviewed community water systems (CWS) overseen by the Water Bureau's Upper Peninsula District Office, as well as nontransient noncommunity water systems (NTNCWS) and transient noncommunity water systems (TNCWS) maintained by the local health departments with oversight by MDEQ's Noncommunity Drinking Water Unit. This report documents the findings of the review.

The MDEQ central office is in Lansing. The Field Operations Division is divided into eight district offices; all of which were visited by Region 5 staff during MDEQ's 2002 DV or 2005 DV, except for the UP district office. Due to timing and travel issues while planning the 2005 DV, the UP district office DV was postponed until May 2006.

The DV had two objectives. The first was to detect any discrepancies between the PWS data in Michigan's files and databases and the data reported to the Federal Safe Drinking Water Information System (SDWIS/Fed) regarding inventory, violations, and milestones (if applicable) for the Consumer Confidence Report Rule (CCR), Total Coliform Rule (TCR), Lead and Copper Rule (LCR), Phase II/V Rules, Interim Enhanced SWTR (IESWTR), Radionuclides Rule, Stage 1 Disinfectants and Disinfection By-Products Rule (Stage 1 DBPR), Filter Backwash Recycling Rule (FBRR), and the Public Notification (PN) Rule. The team used the standard SDWIS/Fed 35 reports to detect these discrepancies. The second objective was to ensure that MDEQ is determining compliance in accordance with Federal and State primacy regulations.

The outcome of the DV is an itemization of discrepancies, calculated by system type (i.e., CWS, NTNCWS, and TNCWS) and by regulation. The team totals the number of violations incurred by the systems during the period of review and then determines the number of these violations, and any other discrepancies, that were not reported or were reported incorrectly to SDWIS/Fed.

There are two types of discrepancies: data flow discrepancies and compliance determination discrepancies. Data flow discrepancies are violations of National Primary Drinking Water Regulations that are detected by the State program, but are not posted to SDWIS/Fed. Team members know that the State program detected the violation when they find correspondence with the system; enforcement actions; or violations in the State Safe Drinking Water Information System (SDWIS/State), the State's database; or system files. Data flow discrepancies also occur when the State incorrectly reports a violation to SDWIS/Fed, such as by incorrectly coding a violation. Compliance determination discrepancies occur when the program does not detect a violation or reports a violation to SDWIS/Fed that is not substantiated by information in the program files or database.

Appendix A lists the systems selected for review. Appendix B provides the system-specific lists of each discrepancy organized by rule.

II. Description of the Sample

The number of systems reviewed was based on the UP district office's total inventory of systems in SDWIS/Fed as of April 26, 2006. That inventory consisted of 121 active CWSs, 55 active NTNCWSs, and 746 active TNCWSs. From that inventory, 20 CWSs, 10 NTNCWSs, and 5 TNCWSs were randomly selected for review. This sample size was based on a targeted confidence level of 90 percent with an error tolerance level of 7.5 percent for CWSs; 80 percent with an error tolerance level of 10 percent for NTNCWSs; and, 80 percent with an error tolerance level of 12 percent for TNCWSs. A detailed description of the sampling methodology can be found in Chapter 3 of the EPA Protocol for Participation in a PWSS Program Data Verification, available from The Cadmus Group, Inc.

Table 1 identifies the Federal Safe Drinking Water Information System (SDWIS/Fed) inventory for the UP district office and the number of systems in the random sample reviewed by the team.

Table 1: Number of PWSs in Michigan Upper Peninsula Identified in SDWIS/FED Inventory and Michigan Inventory[1], and Number Reviewed by the Data Verification Team

	Number of CWSs	Number of NTNCWSs	Number of TNCWSs
SDWIS/FED Inventory	121	55	746
Michigan Inventory	121	53	747
Systems in Sample (35 total)	20	10	5
Small Systems	16	10	5
Medium Systems	4		
Large Systems	None		
Very Large Systems	None		

[1]SDWIS/FED Inventory as of 4/26/06. Michigan Inventory as of 5/31/06.
Small: <3,300, Medium: 3,300 – 9,999, Large: 10,000 – 999,000, Very Large: >1,000,000

The team reviewed the UP district office's system files, the SDWIS/State database, and the online WaterTrack database for noncommunity water systems for updates to inventory and compliance data for the CCR, TCR, LCR, Phase II/V Rules, IESWTR, Radionuclides Rule, Stage 1 DBPR, FBRR and the PN Rule. The period of review for each regulation is shown in Table 2.

Table 2: Period of Review for Each Regulation

Category	Date
Inventory	Most Recent
Consumer Confidence Report (CCR)	Year 2004, Due 2005
Sanitary Survey	Two Most Recent Surveys
Total Coliform Rule	2005
Lead and Copper Rule	Two most recent samples
Phase II/V Rules (except nitrate)	2002 - 2004
Nitrate	2004, 2005
Stage 1 Disinfection By-Products Rule (DBPR)	2005
Radionuclides Rule	Two most recent samples
Surface Water Treatment Rule (SWTR)	2005
Interim Enhanced SWTR (IESWTR)	2005
Filter Backwash Recycling Rule (FBRR)	2004
Public Notification Rule	Per related violation

III. State Data Flow

Describing the flow of information from the point of sample collection to the submission of violations, enforcement actions, and milestones to SDWIS/Fed sometimes illustrates problems States face in managing their large data sets. The chain of custody for samples is explained below, as are the methods used by MDEQ to store information and calculate compliance.

System Files. The UP district office and Local Health Departments (LHD) maintain hard copy files of analytical results, inventory, enforcement correspondence, source water assessments, SWTR evaluations, site sampling plans, and PN. Inventory information is included on sanitary surveys and stored electronically in SDWIS/State and WaterTrack. SDWIS/State has been networked statewide and WaterTrack is networked through the LHDs.

The UP district office provided organized files, which were organized in date order, and easy to locate. WaterTrack proved to be a nearly comprehensive representation of information from the LHDs' jurisdiction over the noncommunity systems.

Sample Collection and Analysis. All samples are collected by the systems. Some PWSs deliver samples to the laboratories by hand, but most are sent by U.S. Postal Service or the United Parcel Service.

In the UP, almost all of the chemical samples are analyzed by the MDEQ State laboratory in Lansing. That laboratory also analyzes about half of the LCR and TCR samples. The other half of the samples are analyzed by smaller commercial laboratories. Some larger communities and some LHDs have their own laboratories.

The State laboratory sends hard copy analytical results to the district office for CWSs and the LHDs for noncommunities, usually as PDF files, which are then printed out and manually entered into SDWIS/State. WaterTrack captures all noncommunity system results from the State laboratory, including a few commercial laboratories that enter results into WaterTrack. Commercial laboratories provide the results to their client systems, which then send hard copies to the district offices or LHDs. These data may be delivered electronically in the future.

Data Storage and Compliance Determination. The UP district offices retain hard copies of analytical results for all rules for CWSs. Some data are also entered into SDWIS/State. The LHDs in each county retain hard copy files and also enter all data into WaterTrack, their common database, overseen by the MDEQ Central Office in Lansing.
The laboratories are required to notify systems of a positive total coliform sample in a timely manner. Michigan state law places the burden of action on the system and requires the system to inform their district office, or LHD when the system has a total coliform positive sample. If fecal coliform or *E. coli* is present, the State laboratory must call the district office, following a prescribed phone tree. The EPA laboratory certification manual requires any private laboratory certified by EPA or the State to notify the system of a total coliform positive sample within 24 hours.

Phase II/V compliance is determined through SDWIS/State or WaterTrack, after data have been entered. Also, district office personnel may use Excel or other Access tables to allow them to track compliance and violations. District offices are manually generating violation letters, rather than using SDWIS/State.

SDWIS/Fed Submittals. The State reports system-specific data to SDWIS/Fed. Current actions and inventory are updated quarterly using the total replace method. Lead sample values are reported less frequently. MDEQ uploads to SDWIS/Fed via data transfer files to the central data exchange from SDWIS/State for CWSs and from WaterTrack for noncommunity systems. MDEQ does not typically encounter problems submitting data to SDWIS/Fed. They have successfully sent data to the SDWIS Operational Data System (SDWIS/ODS) using Extensible Markup Language (XML).

IV. Differences in Implementation of Regulations in Michigan

Michigan has primacy or has submitted primacy applications for all rules reviewed by the team. The State is continuing dialogue with U.S. EPA Region 5 regarding requirements of the LCR Minor Revisions (LCRMR). Michigan does not currently have the legal authority to enforce the requirement that all NTNCWSs collect five samples, as stated in a letter from the State Attorney General, dated January 6, 2003. However, through a Primacy Extension Agreement dated March 2002, the State agreed to notify EPA Region 5 of any instance

where a system failed to collect the required number of samples. The DV revealed 5 of the 10 NTNCWSs that were reviewed did not collect the Federally required number of lead and copper samples, and that the State had not notified EPA Region 5 of this occurrence. While the team acknowledges that the State is not legally permitted to enforce the five-sample requirement, it should have identified the systems' monitoring performance and notified EPA Region 5 that the Federal requirement was not met, as agreed to in the Primacy Extension Agreement. As a result, the 5 instances are treated as data flow discrepancies (errors) in this report, in that the State did not provide required data to EPA.

Michigan has statewide waivers for dioxin, 1,2-Dibromomethane (EDB), 1,2-Dibromo-3-chloropropane (DBCP), di(ethylhexl)adipate, di(ethylhexyl)phthalate, diquat, endothall, glyphosate, polycyclic aromatic hydrocarbons (PAHs), and dalapon. MDEQ also implements a chemical waiver program by source that allows for reduced monitoring for inorganic chemicals (IOCs), volatile organic compounds (VOCs) and synthetic organic chemicals (SOCs).

MDEQ does not report sanitary survey violations to SDWIS/Fed; it is not a current reporting requirement for SDWIS.

U.S. EPA Region 5 provided guidance to its States in response to the March 2002 radionuclide rule reporting guidance. The Region identified problems with the accurate reflection of radionuclide maximum contaminant levels (MCLs) in SDWIS/Fed. The regional guidance, dated December 2, 2004, allowed alternative reporting of radiological MCL violations by only requiring an MCL violation to be reported once, which could remain open until the system was returned to compliance. This was intended to reduce the States' burden of reporting each quarterly violation to SDWIS/Fed.

In addition, U.S. EPA Region 5 approved alternate "trigger levels" for SOCs that are higher than the detection limits set by U.S. EPA Headquarters and higher than the upper confidence limits approved in the June 9, 1994 U.S. EPA Headquarters memo. U.S. EPA Region 5 finalized revisions of these alternate trigger levels on July 13, 2006. The trigger levels approved in 1994 and in 2006 are located in Appendix C.

Resource limitations have had a significant impact on Michigan's Public Water Supply Supervision program. Increased requirements coupled with a decrease in available funding have required the MDEQ to prioritize program activities and focus resources on the most important program areas. Throughout 2006, the MDEQ and Region 5 had discussions regarding possible temporary disinvestments of non-public health related primacy activities. In December 2006, the MDEQ and the Region agreed to a number of non-public health related primacy activities that the State will disinvest in during 2007. A number of the disinvested activities are noted as discrepancies in this report. Since these activities have been disinvested in by the State, the Region notes in the Recommendations section that we understand that the State will temporarily be disinvesting in taking action on the discrepancy.

Below are the findings of the DV team. A discussion of implementation policies, as they apply, and the areas requiring improvement, as related to the identified discrepancies, are

also provided. The exhibits with system-specific discrepancies by rule, are provided in Appendix B.

V. Inventory Data

A. Scope of Inventory Data Reviewed

The review upon which this data verification report is based focuses on these nine elements:

PWS ID Number
PWS Type *(i.e. Community; Nontransient Noncommunity; or Transient Noncommunity)*
PWS Activity Status *(i.e. Active or Inactive)*
System Status *(i.e. Current or Historical)*
PWS Source Type *(i.e. Ground Water; Purchased Ground Water; Surface Water; Purchased Surface Water; Ground Water Under the Direct Influence of Surface Water; or Purchased Ground Water Under the Direct Influence of Surface Water)*
Population Served by the PWS
Number of Retail Service Connections
Administrative Contact/Responsible Party
Address of Administrative Contact/ Responsible Party

For each water system in the sample, the review team compared the information in the state's files, or data system, to the information in the federal data system. Whenever there was an inconsistency in the information the difference is noted. For most of the data elements reviewed, the information is expected to be in complete agreement (e.g. the ID number must agree, the system type must agree), or a data discrepancy is recorded for that data element. For population and service connections, however, the data element is not considered to be a data discrepancy unless the difference between the information in the state records and federal data system is greater than 10 percent.

B. State Inventory Reporting Process

MDEQ's inventory information for CWSs is maintained in SDWIS/State and in the central and district office files. Inventory for noncommunities is maintained by the LHDs and stored in hard copy files and in the WaterTrack database. The primary source for inventory information is the sanitary surveys. Data are updated as received. Population and service connection information come from the PWS or census data. Annual fees are based on population for CWSs, and set fees are applied to noncommunity systems.

C. Inventory Discrepancies

The DV team compared the information in the most recent sanitary surveys in the files kept by the UP district office and occasionally in SDWIS/State, to the information in SDWIS/Fed for 20 CWSs and in WaterTrack for 10 NTNCWS, and 5 TNCWSs for the 9 data elements listed in Subsection A, above. Nine discrepancies were identified, four for population, and five for service connections that had not been updated in SDWIS/Fed. In all cases, the

populations or service connections had been updated on sanitary surveys, but not corrected in SDWIS/State.

The team did note, however, that for all 15 of the noncommunity water systems covered in this review, the Administrative Contact (AC) name field in SDWIS/Fed contained an entry other than a person's name. The Office of Ground Water and Drinking Water's (OGWDW) policy was recently changed to clarify that the AC name field does not have to contain the name of a person, but a person's name is still encouraged. Many regulators have found that correspondence to systems that have a person's name in the AC name field, especially at noncommunity systems, is often returned to the state as undeliverable because of the frequent turnover of owners or operators. In such cases, letters containing compliance schedules or important information pertaining to public health are not received by the responsible individuals at the public water system who would need to take action on the letter. It should be noted that this review did not count the 15 cases cited above as data discrepancies. The review did, however, expect that the AC name field in SDWIS/Fed be populated, and that the entity entered in SDWIS/Fed be in agreement with that identified in the state's records. Any instances where the field was not populated at all, or the entities did not agree, would have been counted as discrepancies.

Discrepancies for population and service connections were identified for two community groundwater systems, which included a mobile home park; four NTNCWSs and one TNCWS. One additional TNCWS, Gerometta's Resort, has service connection changes each time that a sanitary survey is conducted. The LHD has consistently made the changes in WaterTrack to reflect the change in service connections; however, this situation is a reminder to ensure that the inventory data is updated to WaterTrack regularly.

The system-specific discrepancy findings are located in Appendix B.

Recommendations

Populations updated during sanitary surveys should be updated in SDWIS/Fed. Service connections should be updated in SDWIS/Fed when they change.

VI. Sanitary Surveys

A. State Sanitary Survey Program Summary

Sanitary surveys are performed by the UP district office and LHDs. MDEQ's internal sanitary survey goals are once every 3 years for communities, once every 3 years for surface water systems, and once every 5 years for mobile home parks and noncommunities. The UP district office conducts annual evaluations at each of its LHDs to ensure systems are meeting regulatory requirements, including sanitary surveys every 5 years. As part of the MDEQ's contract with the LHDs, if more than 20% of the systems are overdue for a sanitary survey in a contract period, it is determined that the LHD is not meeting the contract requirement and must submit a corrective action plan. This plan includes a formal schedule that addresses the systems that have not had a sanitary survey in the past 5 years. If less than 20% of the

systems have surveys older than 5 years, the MDEQ notes that the LHD needs to increase the number of surveys done per year so that all surveys are completed every 5 years. The sanitarians informally conduct the surveys as they can be scheduled. Systems with surveys older than 5 years are identified by the UP district office for review during the next year's LHD annual evaluation.

Sanitary surveys are of great importance to maintaining compliance and have been a cornerstone of the MDEQ's emphasis on preventing violations. During 2006, it came to the Region's attention that not all surface water systems were having a sanitary survey conducted at the required frequency of once every 3 years. MDEQ indicated they are not yet quite meeting the goal of once every 5 years for the mobile home parks and noncommunity water systems. MDEQ has reviewed the sanitary survey schedule with the district offices that conduct the surveys, and has developed a schedule for completion for CWSs to ensure that surveys are conducted at the proper frequency.

B. Sanitary Survey Discrepancies

The team checked for the two most recent sanitary surveys: to see whether an initial sanitary survey was conducted by the required date and whether subsequent surveys were performed at least every 5 years. Discrepancies were identified for two community groundwater systems, that includes a mobile home park; and three NTNCWSs that received sanitary surveys more than 5 years apart, or no evidence that a second sanitary survey had been conducted. No TNCWSs were found to have sanitary surveys more than 5 years apart.

The system-specific discrepancy findings are located in Appendix B.

Recommendations

MDEQ must ensure that sanitary surveys are conducted at the required frequency in the interest of preventing violations and protecting public health.

Please note that the Ground Water Rule becomes effective December 1, 2009, thus sanitary surveys for all community water systems including mobile home parks, must be completed within the 3-year window by December 31, 2012. Noncommunity water system sanitary surveys must be completed within the 5-year window by December 31, 2014.

VII. Consumer Confidence Reports

A. State Consumer Confidence Report Program Summary

The UP district office receives and dates CCRs and certifications, checks them for completeness, and issues violations for late CCR certification.

B. Consumer Confidence Report Discrepancies

The team checked to see whether CCRs for 2004 were sent to consumers by July 1, 2005, and whether MDEQ had received certification by October 1, 2005. No discrepancies were found for CCRs in the UP District office.

In December 2006, the MDEQ and the Region agreed to a number of non-public health related primacy activities that the State will disinvest in during 2007, including reporting violations relating to late submittal of CCRs and receipt of CCR certifications. Even though discrepancies were not identified in this area, it should be noted that the State will temporarily be disinvesting in CCR related activities.

VIII. Total Coliform Rule

A. TCR Reporting Process

TCR data flow and compliance determination were described in Section III. The UP district office requires PWSs to collect repeat samples within 24 hours of receiving a coliform-positive result, though systems do not always meet this timeline. The UP district office requires a minimum of five routine TCR samples in the month following a positive result, unless a site visit is conducted. TCR samples are not invalidated, unless the laboratory invalidates samples in writing.

B. TCR Discrepancies

The DV team reviewed hard copy lab slips and SDWIS/State for TCR data collected from January 1, 2005, through December 31, 2005, for 20 CWSs. The WaterTrack database was reviewed for 10 NTNCWSs, and 5 TNCWSs.

Two discrepancies were identified. The UP district office incorrectly reported a routine major monitoring/reporting (M/R) violation, instead of a routine minor M/R violation, for a system that took 2 routine samples of the 5 required samples. One NTNCWS had a total coliform positive sample in July, and collected the 4 required repeat samples. The TCR requires a system to take 5 routine samples the month following a total coliform positive. In August, the system took its 2 routine samples and 1 sample was total coliform positive. The system took the required 4 repeat samples. Thus, the system only collected 2 out of 5 required routine samples August, even though 4 repeat samples were also taken.

The system-specific discrepancy findings are located in Appendix B.

Recommendations

The UP district office must ensure that systems collect sufficient repeat and routine samples following a total coliform-positive result. Please note that the Region interprets 40 CFR 141.21(b)(4) to say that once an MCL has been determined, no more repeat samples need to be taken.

The UP district office must ensure that all violations that they assign are properly reported to SDWIS/Fed.

IX. Phase II/V Rules

A. Notes Regarding Phase II/V Rule Review Methodology

Beginning in 1999, DV teams no longer examine data for the 1993-1995 initial compliance period for the Phase II/V rules. For this DV, the team reviewed data and actions from only the most recent compliance period of 2002-2004 for these rules. The review did not determine whether waivers were issued or grandfathered data were accepted properly, and the team calculated compliance based on the schedule for monitoring established by the state for that compliance period.

B. Phase II/V Rule Reporting Process

Phase II/V data flow and compliance determination were described in Section III. MDEQ issues Phase II/V waivers to systems on the basis of whether a system uses ground water or surface water sources, or whether they have an approved wellhead program and a vulnerability assessment (both of which may include testing for the presence of tritium in ground water). PWSs do not request waivers, but are granted waivers after evaluation of an approved wellhead delineation program or vulnerability assessments are completed.

Inorganic Chemicals (IOCs). Asbestos waivers are granted statewide, unless there are concerns with the distribution system. Systems can also be waived for cyanide monitoring if they chlorinate. All IOC monitoring may be waived to a cycle of one sample every 9 years.

Volatile Organic Compounds (VOCs). All VOC monitoring may be waived to a cycle of one sample every 6 years based on vulnerability and detection history.

Synthetic Organic Chemicals (SOCs). SOC monitoring may be entirely waived for non-vulnerable systems. If coal tar lining is present, testing for Benzo(a)pyrene is required. Contaminants waived statewide are dioxin, EDB, DBCP, di(ethylhexl)adipate, di(ethylhexyl)phthalate, diquat, endothall, glyphosate, polycyclic aromatic hydrocarbons (PAHs), dioxin and dalapon.

With regard to SOC monitoring, State rule 717(8) states: "Each community and nontransient water supply may apply to the department for a waiver from the requirements of subrule (5), (6), or (7) of this rule. A supplier shall reapply for a waiver for each compliance period."

MDEQ's sampling protocol has evolved into sampling for SOCs every 6 years at NTNCWSs, which does not follow the State rule. The Region will work with Michigan in 2007 to ensure State and Federal regulation monitoring frequencies are being met.

In addition, U.S. EPA Region 5 approved alternative "trigger levels" for SOCs that are higher than the detection limits set by U.S. EPA Headquarters, in a 1994 memo. These trigger levels were revised in July 2006. The trigger levels approved by Region 5 in 1994 and in 2006 are located in Appendix C.

During the DV, it was noted that Delta and Menominee County Health Department provided very good documentation in the files concerning complete metals/cyanide waivers to one sample every 9 years; and Phase II/V monitoring waivers.

C. Phase II/V Rule Discrepancies

The DV team reviewed 20 CWSs primarily through hard copy files and some data from SDWIS/State for IOCs, VOCs, and SOCs for the compliance period January 1, 2002, through December 31, 2004; nitrates were reviewed for calendar years 2004 and 2005. Ten NTNCWSs were likewise reviewed, but through the WaterTrack database, with some supplementary hard copy information for nitrate samples.

Four discrepancies at CWSs were identified overall; three for IOCs and one for SOCs. Discrepancies were identified for systems that failed to conduct IOC and SOC monitoring according to the State's monitoring schedule.

The system-specific discrepancy findings by chemical group are located in Appendix B.

Recommendations

Systems that do not monitor according to the Phase II/V monitoring schedule should receive M/R violations.

X. Stage 1 Disinfectant and Disinfection By-Products Rule

A. Stage 1 Disinfectant and Disinfection By-Products Reporting Process

Stage 1 DBPR sampling began on time. Distribution system disinfectant residual results are recorded on TCR monitoring forms and sometimes entered into SDWIS/State. Some systems record disinfectant residuals and related calculations along with their monthly operating reports. Compliance determination is carried out as described in Section III.

B. Stage 1 Disinfectant and Disinfection By-Products Rule Discrepancies

Hard copy and database information for systems that use a chemical disinfectant were reviewed for the period January 1, 2005 through December 31, 2005. This included 9 CWSs. None of the noncommunity systems reviewed used a chemical disinfectant. Thirty-nine

discrepancies were identified for compliance determination errors for six systems. All discrepancies related to minimum residual disinfectant levels (MRDL).

Twelve discrepancies were assigned for each of two systems that did not have monthly and running annual averages calculated. One additional discrepancy was identified for a system for which the running annual averages could not be located. According to Stage 1 DBPR, systems must report monthly and running annual averages for chlorine residuals taken at the same time and place as TCR samples. The State may perform these calculations for the system, but the calculations must be performed and recorded. An additional seven discrepancies were identified for a system where chlorine residuals were not found in February, April and May; in addition to no monthly averages submitted for February – August 2005, until requested during the DV. The system re-sent correct results to the State once the team discovered samples were missing. One discrepancy was assigned to a system that did not conduct TOC removal sampling/calculations. Six discrepancies were assigned to three systems that did not conduct TTHM and HAA5 analyses during 2005, because the UP district office did not remind the systems to take the samples. Monitoring is the system's responsibility; a violation should have been reported to SDWIS/Fed for failure to submit results within 10 days of the end of the compliance period.

A system-specific list of Stage 1 DBPR discrepancies is located in Appendix B.

Recommendations

MDEQ received primacy for the DBPR on January 5, 2006. Due to resource shortages, MDEQ has been unable to implement the DBPR at most NTNCWSs that chlorinate. While the Region acknowledges the increasing number of requirements of new regulations, decreasing resources and the MDEQ's need to prioritize its activities to implement the SDWA, the Region cannot ignore noncompliance of the rule. The Region will work with MDEQ in 2007 to ensure that the NTNCWSs are notified of their requirements under the rule and begin implementation.

In several cases during the DV, it appeared that data was being submitted to the UP district office, but it was not being entered into SDWIS/State in a timely manner. Please ensure data is entered into SDWIS/State in a timely manner.

During the DV, it was noted that some systems that were allowed to go to reduced monitoring of total trihalomethanes (TTHM) and haloacetic acids (HAA5) (one sample for each contaminant every 3 years), had a monitoring schedule that required annual monitoring. Please ensure the monitoring schedules accurately reflect the actual required monitoring.

The UP district office should ensure that systems are meeting the following disinfectant residual reporting requirements within 10 days of the end of each month:

- chlorine residual samples
- monthly average of all samples taken in each month for the last 12 months
- the average of all monthly averages for the last 12 months only if any monthly average is above the MRDL (see Note below).

The UP district office should also ensure that TOC removal sampling/calculations and TTHM/HAA5 sampling are conducted and submitted to the district office according to each system's monitoring schedule.

Note: As discussed in Part IV, MDEQ and the Region agreed that the State could disinvest in a number of non-public health related primacy activities. The following activities have been disinvested by the MDEQ in 2007:

> "The MDEQ will enforce failure to collect disinfectant residuals, but does not commit to calculating the running annual average (RAA) or to ensuring systems submit the RAA when all monthly averages are known to be below the maximum residual disinfectant level."

Thus, the Region understands that the State will temporarily be disinvesting in taking action on discrepancies related to a RAA when all monthly averages are below the MRDL.

XI. Radiological Contaminants

A. Radiological Reporting Process

Radiological data flow and compliance determination were described in Section III. In January 2004, MDEQ began implementing the new Radionuclides Rule sampling protocol for new systems or new points-of-entry.

U.S. EPA Region 5 provided guidance to its States in response to the March 2002 Radiologicals Rule reporting guidance. The Region identified problems with the accurate reflection of radionuclide MCLs in SDWIS/Fed. The Regional guidance, dated December 2, 2004 allowed alternative reporting of radiological MCL violations by only requiring an MCL violation to be reported once, which could remain open until the system was returned to compliance. This was intended to reduce the States' burden of reporting each quarterly violation to SDWIS/Fed.

B. Radiological Discrepancies

The DV team reviewed primarily hard copy radiological data for 20 CWSs for the two most recent samples. Overall, compliance for the Radionuclides Rule was excellent. No discrepancies were identified in the UP district office.

XII. Lead and Copper Rule

A. Notes Regarding Lead and Copper Rule Review Methodology

Now that the LCR Minor Revisions (LCRMR) are in effect and questions about implementation and reporting requirements for the LCR and LCRMR have been resolved, the DV team counted LCR discrepancies as for other rules. The team reviewed the two most recent samples collected for the systems included in the review.

B. Lead and Copper Reporting Process

Lead and copper results are received as described in Section III. The State has interim primacy for LCRMR and has committed to increasing LCRMR milestone data in SDWIS by 50% during FY 2007 (i.e. "deem/done"). Michigan does not currently have the legal authority to enforce the requirement that all NTNCWSs collect a minimum of five samples, as noted by the Michigan Attorney General, dated January 6, 2003. The Region and the State have discussed this requirement with Headquarters, as related to the recent LCRMR proposed regulation change.

Through a Primacy Extension Agreement dated March 2002, the State agreed to notify EPA Region 5 of any instance where a NTNCWS failed to collect the required number of samples. The DV revealed that 6 instances were identified at 5 of the 10 NTNCWSs reviewed, where the system did not collect the federally required number of samples. Since the State is not legally permitted to enforce the five-sample requirement, it should have identified the system's monitoring performance and notified EPA Region 5 that the Federal requirement was not met, as agreed to in the Primacy Extension Agreement. As a result, the 6 instances are treated as data flow discrepancies (errors) in this report, in that the State did not provide the required data to EPA.

The 90th percentile value for lead and copper is calculated by the UP district office. Or, if data are sent to the client PWS by a private laboratory, the laboratory and PWS calculated the 90th percentile and the MDEQ district office verifies the value. In the event of an action level (AL) exceedance, the UP district office sends a letter detailing follow-up steps required.

C. Lead and Copper Discrepancies

The DV team reviewed primarily hard copy results and occasionally SDWIS/State for lead and copper data for the two most recent samples for 20 CWSs. WaterTrack data were reviewed for 10 NTNCWSs, with some supplementary information from hard copy files provided.

Eighteen discrepancies were identified for 6 CWSs and 7 NTNCWSs. Six of these were data flow discrepancies at 5 NTNCWSs that failed to collect at least five tap samples, as previously discussed. Four data flow discrepancies were assigned for failure to report 90th percentile lead results (for CWSs serving more than 3,300 customers, after 2002) to SDWIS/Fed. Three systems, two which are schools, sampled outside the summer months of June through September; no discrepancies assigned.

MDEQ requires sampling according to a triennial schedule for reduced lead sampling. Six discrepancies were assigned to one CWS and 5 NTNCWSs systems that took samples outside of the required 3-year window. One of the NTNCWSs was incorrectly notified by the UP district office that it could sample every 3-year compliance period, which puts sampling outside of the required 3-year window.

Two CWSs received discrepancies for failure to collect enough lead and copper samples based on population served.

A system-specific list of LCR discrepancies is located in Appendix B.

Recommendations

MDEQ should ensure that all AL exceedances and lead 90th percentile results for systems serving more than 3,300 customers are reported to SDWIS/Fed as sample results. Any AL exceedance must follow the protocol of collecting water quality parameters, conducting public education, etc., in the interest of public health protection.

MDEQ should assign and report violations when PWSs fail to collect triennial samples on time; the rule requires that systems sample every 3 years, not every 3-year compliance period.

MDEQ should ensure that PWSs collect enough tap samples based on population served and that violations are reported to SDWIS/Fed for all systems that fail to do so.

Note: As discussed in the Part IV, MDEQ and the Region agreed that the MDEQ could disinvest in a number of non-public health related primacy activities. The following activities have been disinvested by the MDEQ in 2007:

> --"In light of the recent LCRMR proposed regulation change that requested comment on requiring only one sample per available tap, the MDEQ will not refer to the Region NTNCWSs that do not take a minimum of five samples if they have fewer than five taps."
> --"The MDEQ does not commit to ensuring NTNCWSs collect Lead and Copper Rule reduced monitoring compliance samples during the June – September time period, as stated in the regulations. There are no data to demonstrate on a national basis that the highest risk months are June – September. The MDEQ does not have the resources to determine the highest risk four-month period for individual NTNCWSs, and therefore the MDEQ will accept samples taken throughout the year."

Thus, the Region understands that the State will temporarily be disinvesting in taking action on discrepancies related to less than five samples taken at NTNCWSs and reduced monitoring samples taken outside of the June – September time period.

XIII. Long Term 1 Enhanced Surface Water Treatment Rule

A. Long Term 1 Enhanced Surface Water Treatment Rule Reporting Process

Groundwater under the direct influence (GWUDI) determinations in Michigan have been completed.

The UP district office receives and reviews monthly operating reports (MORs). Compliance is determined manually. There are no Statewide standardized forms.

B. Long Term 1 Enhanced Surface Water Treatment Rule Discrepancies

The team reviewed 3 non-purchased surface water systems serving populations fewer than 10,000 persons.

No discrepancies were identified in the UP district office.

XIV. Interim Enhanced Surface Water Treatment Rule

A. Interim Enhanced Surface Water Treatment Rule Reporting Process

Michigan surface water CWSs serving more than 10,000 persons have begun monitoring and reporting according to the IESWTR. The reporting process and compliance determinations are the same as for the LT1ESWTR described in Section XIII. Disinfection benchmarking has been completed.

B. Interim Enhanced Surface Water Treatment Rule Discrepancies

The team reviewed no surface water CWSs serving populations more than 10,000 persons.

APPENDIX A

SYSTEMS SELECTED FOR REVIEW

APPENDIX A

Stratified Random Sample of 20 Active Community Water Systems in Michigan's Upper Peninsula
[Source: SDWIS/ODS as of 3/29/06 Update]

Population 9,999 – 3,300

PWSID	SYSTEM NAME	POPULATION	SOURCE	COUNTY
MI0002640	Gladstone	4,396	Surface Water	Delta
MI0003230	Houghton	7,512	Ground Water	Houghton
MI0003640	Kingsford	5,480	Ground Water	Dickinson
MI0004650	Negaunee	4,741	Ground Water Purchased	Marquette

Population less than 3,300

PWSID	SYSTEM NAME	POPULATION	SOURCE	COUNTY
MI0000020	Adams Township	2,010	Ground Water	Houghton
MI0000410	Baraga	2,240	Surface Water	Baraga
MI0000660	Bessemer	2,272	Ground Water	Gogebic
MI0000700	Powell Township	300	Ground Water	Marquette
MI0001040	Calumet	818	Ground Water Purchased	Houghton
MI0001070	Ojibway Correctional Facility	422	Ground Water	Gogebic
MI0040515	Riversbend Mobile Home Park	180	Ground Water	Dickinson
MI0001700	Crystal Falls	1,922	Ground Water	Iron
MI0001795	Detour	421	Surface Water	Chippewa
MI0002685	Gogebic Range Water Authority	2,000	Ground Water Purchased	Gogebic
MI0004560	Munising	2,783	Ground Water	Alger
MI0004561	Munising Industrial Park	465	Ground Water	Alger
MI0004730	Newberry Correctional Facility	800	Ground Water	Luce
MI0005590	Breitung Township	1,200	Ground Water	Dickinson
MI0005680	Franklin Township	300	Ground Water	Houghton
MI0006680	Interior Township	200	Ground Water	Ontonagon

Random Sample of 10 Active Nontransient Noncommunity Water Systems in Michigan's Upper Peninsula
[Source: SDWIS/ODS as of 3/29/06 Update]

PWSID	SYSTEM	POPULATION	SOURCE	COUNTY
MI1720002	Whitefish Township School	92	Ground Water	Chippewa
MI2120178	Escanaba Paper Company	1,300	Ground Water	Delta
MI2120206	Country Schoolhouse Day Care	25	Ground Water	Delta
MI2220046	North Dickinson School	500	Ground Water	Dickinson
MI4820133	Pathways	75	Ground Water	Luce
MI4920170	Curtis Elementary School	144	Ground Water	Mackinac
MI4920479	Les Cheneaux School	500	Ground Water	Mackinac
MI4920671	Cedar Cove Manor	32	Ground Water	Mackinac
MI5520086	Menominee County Road Commission	32	Ground Water	Menominee
MI5520138	North Central Area Elementary School	270	Ground Water	Menominee

Random Sample of 5 Active Transient Noncommunity Water Systems in Michigan's Upper Peninsula
[Source: SDWIS/ODS as of 3/29/06 Update]

PWSID	SYSTEM	POPULATION	SYSTEM	COUNTY
MI7720068	Hiawatha Motel	40	Ground Water	Schoolcraft
MI 7720216	Gerometta's Resort	60	Ground Water	Schoolcraft
MI1720344	D.I. Resort and Conference Center	25	Ground Water	Chippewa
MI2220088	Newberg Park	25	Ground Water	Dickinson
MI4920234	Cut River Inn	79	Ground Water	Mackinac

APPENDIX B

SYSTEM-SPECIFIC DISCREPANCIES BY RULE

Exhibit 1
Inventory Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
40515	Riversbend MHP	1 DF	Sanitary survey dated 7/14/05 and facility surveillance reports indicate 51 sites, and all sites full. SDWIS/Fed reports 77 service connections. State files should match SDWIS. Number of service connections changed from 77 to 51 in SDWIS in June 2006.
2685	Gogebic Range Water Authority	1 DF	Population listed in SDWIS/Fed is 2000, but actual population should reflect population on 1/24/06 sanitary survey of 960. Population was changed in SDWIS in June 2006.

Nontransient Noncommunity Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
2000217	Whitefish Township School	1 DF	Population on sanitary survey form is listed as 77; population in WaterTrack and SDWIS is listed as 92. Changed in WaterTrack June 2006.
2013348	Pathways	1 DF	Population on sanitary survey form is listed as 60; population in WaterTrack and SDWIS is listed as 75. Correction made in WaterTrack.
2017049	Curtis Elementary School	1 DF	Population on sanitary survey form is listed as 161; population in WaterTrack and SDWIS is listed as 144. Correction made to WaterTrack.
		1 DF	Service connections on sanitary survey is listed as 2; service connections in WaterTrack and SDWIS is listed as 1.
2047949	Les Cheneaux School	1 DF	Service connections on sanitary survey is listed as 1; service connections in WaterTrack and SDWIS is listed as 2. Correction made in WaterTrack.

Transient Noncommunity Water Systems – Inventory Discrepancy Report

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
2008822	Newberg Park	1 DF	Service connections on sanitary survey is listed as 24; service connections on WaterTrack and SDWIS is listed as 15. LHDs may be entering updates on the wrong screen in WaterTrack.

Exhibit 2
Sanitary Survey Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
1040	Calumet	1 CD M/R	Sanitary survey found dated 8/14/02; did not find a previous sanitary survey.
40515	Riversbend MHP	1 CD M/R	A sanitary survey was due in 2005. A facility surveillance report was conducted 7/14/05; however, no evidence that a sanitary survey was conducted in 2005.

Nontransient Noncommunity Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
2017821	Escanaba Paper Co.	1 CD M/R	Sanitary survey found 4/17/95 and 10/23/02; greater than 5 years between surveys.
2047949	Les Cheneaux School	1 CD M/R	Sanitary survey found in 1999 and 2005. Greater than 5 years between surveys.
2013855	North Central Area Elementary School	1 CD M/R	Sanitary survey conducted 3/17/95 and 8/27/02. Greater than 5 years between surveys.

Transient Noncommunity Water Systems – no sanitary survey discrepancies

Exhibit 3
Total Coliform Rule Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
0660	Bessemer	1 DF	System took 2/5 routine samples the month following a positive TCR sample (9/05). State incorrectly reported routine major (23) violation instead of a routine minor (24) violation.

Nontransient Noncommunity Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
2017821	Escanaba Paper Co.	1 CD M/R	TC + sample in July 2005. System should have taken 5 routine samples in August 2005. Only 2 routine samples taken in August 2005 instead of 5.

Exhibit 4
IOC (Complete Metals) Violation Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
0410	Baraga	1 CD M/R	State provided chemical/nitrate results for 2002 which were not applicable; no IOC results found for IOC sample taken in 2002-2004 time period. No violation assigned.
1795	Detour	1 CD M/R	IOC results found for 2000, but could not find IOC sample taken in 2002-2004 time period. State sent 2002, 2003, 2004 chemical/nitrate samples, but not applicable. No violation assigned.
3230	Houghton	1 CD M/R	IOC results found for 2001, but could not find IOC sample taken in 2002-2004 time period. State sent 2002, 2003, 2004 chemical/nitrate samples, but not applicable. No violation assigned.

Exhibit 5
SOC Violation Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
40515	Riversbend MHP	1 CD M/R	No SOC sample(s) taken in 2004. No violation issued.

Exhibit 6
DBPR Violation Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
0410	Baraga	12 CD M/R	Found chlorine residual samples for 2005; did not find monthly average or RAA. No violation assigned.
1795	DeTour	1 CD M/R	Expected to see TOC calculations for Jan-April 2005. No samples found. System should have sampled until filtration change. No violation assigned.
1700	Crystal Falls	2 CD M/R	No TTHM/HAA5 sampling conducted in 2005. No violation assigned. State should ensure system reports zero or <0.2 for chlorine residuals.
3230	Houghton	2 CD M/R 12 CD M/R	No TTHM/HAA5 sampling conducted in 2005. No violation assigned. No average disinfectant residual monthly averages or RAA were found for 2005. No violations assigned.
0020	Adams Township	2 CD M/R	No TTHM/HAA5 sampling conducted in 2005. No violation assigned.
4730	Newberry Correctional Facility	7 CD M/R 1 CD M/R	No chlorine residual samples were found for Feb, April, May. No monthly averages were found for Feb - Aug 2005, until requested during DV. 7 M/R violations should have been reported to SDWIS for failure to submit results within 10 days of the end of the compliance period. RAA for disinfectant residuals was not calculated for 9 months of operation in 2005. No violation assigned.

Exhibit 7
Lead and Copper Rule Discrepancy Report

Community Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
4650	Negaunee	1 CD M/R 1 DF	Based on population of 4741, PWS should collect 20 samples under reduced monitoring. Only 12 samples collected 6/13/05. No violation assigned. Lead 90th percentile value from June 2005, was not reported to SDWIS/Fed.
0660	Bessemer	1 CD M/R	System collected 8/10 required lead/copper samples. Two samples assigned to be collected by Bessemer Twp. Staff were not collected. No violation assigned.
3230	Houghton	1 DF	Lead 90th percentile value from August 2005, was not reported to SDWIS/Fed.
3640	Kingsford	1 DF	Lead 90th percentile value from June 2004, was not reported to SDWIS/Fed.
2640	Gladstone	1 DF	Lead 90th percentile value from June 2004, was not reported to SDWIS/Fed.
40515	Riversbend MHP	1 CD M/R	3-year reduced monitoring required samples to be taken in 2005. No samples collected in 2005. M/R violation was assigned June 2006.

Nontransient Noncommunity Water Systems

PWSID	SYSTEM NAME	DISCREPANCY	COMMENTS
2004622	North Dickinson School	2 DF	System should collect 5 samples under reduced monitoring. Only 1 sample collected 8/28/01, and only 1 sample collected 12/6/04. Also, December 6, 2004 sample not collected within June-September time period

2000217	Whitefish Township School	1 CD M/R	3-year reduced monitoring required samples to be taken in 2001. No samples collected in 2001. Also, December 7, 2004 samples should have been collected within June-September time period.
2017821	Escanaba Paper Co.	1 DF	System should have collected 5 samples instead of 2 on June 16, 2003. Also, system should have collected 5/3/05 samples within June-September time period.
2013348	Pathways	1 CD M/R 1 DF	3-year reduced monitoring required samples to be taken in 2004. No samples collected in 2004. Only 1 sample collected 8/16/01; should have taken 5 samples.
2017049	Curtis Elementary School	1 CD M/R 1 DF	3-year reduced monitoring required samples to be taken in 2003. No samples collected in 2003. Only 1 sample collected 5/22/00; should have taken 5 samples.
2047949	Les Cheneaux School	1 CD M/R 1 DF	3-year reduced monitoring required samples to be taken in 2003. No samples collected in 2003. Only 1 sample collected 9/25/00; should have taken 5 samples.
2013855	North Central Area Elementary School	1 CD M/R	5 samples collected in 2002. No samples found for 2005. Samples must be taken every 3 years, not each compliance period.

APPENDIX C

REVISED SOC TRIGGER LEVELS

Revised Region 5 SOC Trigger Levels
July 13, 2006

SOCs	USEPA MCL mg/L	USEPA SOC MDL mg/L	1994 Interim Trigger Levels mg/L	2006 Region 5 Interim Trigger Levels mg/L	Notes
2,4-D	0.07	0.0001	0.007	**0.001**	Note 3
Alachlor	0.002	0.0002	0.0002	**0.0002**	Note 1
Atrazine	0.003	0.0001	0.0003	**0.0005**	Note 2
Benzo(a)pyrene	0.0002	0.00002	0.00002	**0.0001**	Note 2
Carbofuran	0.04	0.0009	0.004	**0.0009**	Note 1
Chlordane	0.002	0.0002	0.0002	**0.0002**	Note 1
Dalapon	0.2	0.001	0.02	**0.005**	Note 2
Di(2-ethylhexyl)adipate	0.4	0.0006	0.04	**0.0006**	Note 1
Di(2-ethylhexyl)phthalate	0.006	0.0006	0.0006	**0.0006**	Note 1
Dibromochloropropane	0.0002	0.00002	0.00002	**0.00002**	Note 1
Dinoseb	0.007	0.0002	0.0007	**0.001**	Note 2
Diquat	0.02	0.0004	0.002	**0.002**	Note 2
Endothall	0.1	0.009	0.01	**0.009**	Note 1
Endrin	0.002	0.00001	0.0002	**0.0001**	Note 3
Ethylene dibromide	0.00005	0.00001	0.00004	**0.00001**	Note 1
Glyphosate	0.7	0.006	0.07	**0.03**	Note 2
Heptachlor	0.0004	0.00004	0.00004	**0.0002**	Note 2
Heptachlor epoxide	0.0002	0.00002	0.00002	**0.0001**	Note 2
Hexachlorocyclopentadiene	0.05	0.0001	0.005	**0.0005**	Note 2
Lindane (gamma-BHC)	0.0002	0.00002	0.00002	**0.0001**	Note 2
Methoxychlor	0.04	0.0001	0.004	**0.0001**	Note 1
Oxamyl	0.2	0.002	0.02	**0.002**	Note 1
PCBs (decachlorobiphenyl)	0.0005	0.0001	0.0004	**0.0001**	Note 1
Pentachlorophenol	0.001	0.00004	0.0001	**0.0004**	Note 3
Picloram	0.5	0.0001	0.05	**0.001**	Note 3
Simazine	0.004	0.00007	0.0004	**0.00035**	Note 2
2,4,5-TP (Silvex)	0.05	0.0002	0.005	**0.001**	Note 2
Toxaphene	0.003	0.001	0.001	**0.001**	Note 1
Hexachlorobenzene	0.001	0.0001	0.0001	**0.0001**	Note 1

Note 1: 2006 trigger level set at regulatory MDL in 40 CFR 141.24.
Note 2: 2006 trigger level set at 5x the regulatory MDL
Note 3: 2006 trigger level set at 10x the regulatory MDL

All Region 5 interim trigger levels are below the Maximum Contaminant Level.